Amendments to the Specification:

Please amend the paragraph beginning at page 1, line 6 as follows:

> The present invention relates generally to medical treatments. More specifically, the present invention relates to the synchronization of various fluids used to treat renal failure, fluid overload, congestive heart failure, drug overdoses, poisonings, immune disorders, sepsis ~~and or~~ and/or acid balance imbalances.

Please amend the paragraph beginning at page 4, line 21 as follows:

> The present invention provides a system, apparatus and method that allow external infusion, IV or administration pumps to be synchronized with ~~the~~ internal pumps ~~for~~ of a medical fluid therapy machine. The system reduces the time and effort needed to calculate, set-up, enter and maintain flowrates of various fluids, maintained internally or externally with respect to the medical fluid therapy machine. The system also automatically follows therapy requirements, for example, a requirement that one pump/fluid be running/flowing for another pump/fluid to be enabled to run/flow. The system further automatically adjusts for variations in flowrate of one fluid with respect to another. For example, a filtrate/output pump internal to the machine may increase or decrease in response to the flowrate or output rate of a manually entered value of an external pump or measuring device. In short, the system provides a more "hands-off", safe and effective method and apparatus for medical fluid therapy delivery and removal.

Please amend the paragraph beginning at page 8, line 13 as follows:

> Fig. 5 is an additional input screen of the GUI ~~illustration~~ illustrating of a flow calculation that is made automatically by the system of the present invention.

Please amend the paragraph beginning at page 11, line 28 as follows:

> In ~~any~~ either situation, whether a dialyzer or a hemofilter is used, a filtrate pump 118 is employed to remove ultrafiltrate from the patient's blood. That is, whether a hemofilter or a dialyzer is employed, the filtrate pump 118 is used to pull fluid from one of those devices to remove waste products and excess liquid from the patient's blood.

Please amend the paragraph beginning at page 12, line 1 as follows:

> Anticoagulant or syringe pump 120 operates in a similar manner to substitution pump 114 to supply an ~~anticoagulant,~~ anticoagulant to the patient's blood flow line directly. Anticoagulant pump 120 is alternatively located external to machine 20 and communicates with controller 70 via a link 100. For purposes of the present invention it does not matter which pumps are located internal or external

to machine 20 as long as a mode of communication exists via either internal wiring or an external link 100.

Please amend the paragraph beginning at page 12, line 7 as follows:

> In the illustrated embodiment, tachometers or flowmeters 122 to 130 are provided and operate with pumps 112 to 120, respectively. Tachometers 122 to 130 are of any type known to those of skill in the art to monitor the pumps, which are accurate and non-invasive. Tachometers 122 to 130 are placed adjacent to or in relatively direct fluid communication with lines leading directly to or from pumps 112 to 120. Feedback from tachometers 122 to ~~130,~~ 130 for pumps 112 to 120, respectively, is sent electronically to a controller 70. The pumps 112 to 120 are also each connected to or in communication with the controller 70, which in the illustrated embodiment is also housed within housing 25. Controller 70 is also operably connected to the GUI 60.

Please amend the paragraph beginning at page 12, line 24 as follows:

> As illustrated, controller 70 is a multiprocessor type controller in one embodiment. That is, controller 70 includes a first processor 72, or control processor, which communicates with the pumps (pump controllers) to send and receive information to and from the pumps. Processor 72 also communicates with other devices located within MFT machine 20, such as the pressure sensors, temperature sensors, concentration sensors, air detectors, blood detectors and the like. Control processor 72 operates further with each of the other electrical components of machine 20, such as lights, audio outputs, switches, etc.

Please amend the paragraph beginning at page 17, line 7 as follows:

> As illustrated, Pump B (element number 42) is currently running as indicated by column ~~74~~ 58. The pump 42 is not set to auto-remove, so that the pump requires an external start input to initiate flow. Pump B, however, is synchronized with the filtrate pump to only run when the filtrate pump is running, as indicated by column 64.

Please amend the paragraph beginning at page 17, line 23 as follows:

> Column 66 provides a pump identifier. Column 68 specifies the drug or other fluid that is to be injected via the external IV or administration pump. Column ~~72~~ 56 sets forth the desired flowrate for the drug, e.g., by setting a flowrate amount (ml/hr) or by setting a condition, such as a keep vein open condition. Column ~~74~~ 58 illustrates the current status of the particular pump. For example, pumps 42 and 52 are currently running, while pump 32 is stopped. Column 76 illustrates the IV dose for each of the drugs or fluids, which is a calculated value (performed automatically by some external pumps) and is typically the drug's concentration per time unit and/or per patient weight. Column 78 represents the percent of total

> flowrate of the particular drug being pumped by pumps 32, 42, 52 and 54. Column 82 sets forth the amount of fluid remaining in the supplies for pumps 32, 42, 52 and 54, respectively. Column 84 sets forth the amount of time remaining to complete the infusion of a particular drug via one of the pumps 32, 42, 52 and 54.

Please amend the paragraph beginning at page 20, line 20 as follows:

> Data entry layouts 194 and 196 show two possible embodiments for entering values into column 176 of GUI 60. Layout 194 is a toggling system that enables the operator to press an up arrow to increase an input or to decrease an output. Therefore, to decrease the prescribed loss shown in column 86, the operator presses the up arrow which moves the loss of three hundred towards zero. The down arrow in turn moves the loss of three hundred further away from zero. That down arrow also decreases the inputs of rows 87 to 94 towards zero, while up ~~error~~ arrow moves the input values away from zero. When the operator is satisfied with the display of an amount, the operator presses the enter input, which enters the current value highlighted in the display above and moves the entry sequence to the next entry.

Please amend the paragraph beginning at page 22, line 4 as follows:

> Patient ~~XYZ~~ XYZ's prescription has a net fluid removal rate of 300 ml/hr. XYZ's nurse enters into the MFT machine 20 that the patient is to have a prescribed-loss-rate of 300 ml/hr. Patient XYZ also has prescriptions for four administration pumps that are networked under the system 10. Patient output is measured and entered hourly. Patient XYZ's nurse enters the rates for the four pumps (e.g., Pumps A to D) directly through the MFT machine 20, or at one or more interfaces for the external devices. Patient XYZ has a urinary catheter connected to a drain bag that automatically measures the patient's urine output. Patient XYZ begins therapy and the four infusion pumps begin to administer 460 ml/hr in total. The pumps run, nonstop, without alarm or technical problems. Patient XYZ's therapy machine 20 is instructed to give 2000 ml/hr of substitution fluid. Continuously and substantially evenly over each hour, Patient XYZ's therapy machine's filtrate pump removes 2000 ml + 460 ml less any hourly amount reported by the urinary output device.